



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/670,154	09/26/2000	Gengying Gao	75292/06037	4842

7590 08/07/2002
JURGEN K. VOLLRATH
588 Sutter Street
#531
San Francisco, CA 94102

EXAMINER

NGUYEN, TRUNG Q

ART UNIT	PAPER NUMBER
----------	--------------

2829

DATE MAILED: 08/07/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/670,154

Applicant(s)

GAO ET AL.

Examiner

Trung Q Nguyen

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 February 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

1. The Final Rejection mailed May 20, 2002 has been withdrawn. Accordingly, a new office action will be mailed.

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trung Nguyen whose telephone number is 703-305-4925. The examiner can normally be reached on Monday through Friday, 8:30AM – 5:00PM. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached at 703- 308-1680.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.

DETAILED ACTION

Response to Amendment

1. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Paniccia (U.S. 5,872,360).

As to claim 1, Paniccia et al. (hereafter Paniccia) disclose in Figure 4 a method of testing the ESD performance of an IC 405 device comprising a laser beam 413 and monitoring via detector 417 the amount of light reflected from the device (see column 4 line 61 to column 5 line 6).

As to claim 2, Paniccia discloses in Figure 4 a laser beam 413 is used to probe the IC device 405.

As to claim 3, Paniccia discloses in column 5, lines 24-31 that the energy of the laser beam corresponds substantially to the band gap of the substrate of the device.

As to claim 4, Paniccia discloses in column 5, lines 8-10 that the substrate is silicon and in column 5, lines 20-23 that the energy of the laser beam is about 1.1eV (via $\lambda=1.064\text{nm}$ in wavelength, base on $\lambda=E/hc$, h is Plank constant ($h=6.626\times 10^{-34}$) and c is the speed of light ($c=3\times 10^8\text{m/s}$ therefore, $E=1.1\text{eV}$).

As to claim 5, Paniccia discloses in Figure 6 and in column 6, lines 6-14 that the diffusions of the IC device 603 are probed with the laser beam 609.

As to claim 6, Paniccia discloses in Figure 4 and in column 6, lines 13-17 that the device is probed through the back of the device.

As to claim 7, Paniccia discloses in Figure 4 and in column 5, lines 42-58 that the diffusions of I/O cells via P-N Junction of 603 are probed via light 609 to determine how much light is absorbed via light 413 of Fig. 4 and how much light is reflected via light 415 of Fig. 4 by the diffusions 58.

As to claim 8, Paniccia discloses in Figure 7 and in column 7, lines 1-23 that several samples via 703, 705 and 707 are taken of each probed location and the results averaged.

As to claims 9 and 17, Paniccia discloses in Figure 4 and in column 5, lines 20-23 that a mode-locked laser 407 is used to probe the IC device.

As to claims 10 and 18, Paniccia discloses in Figure 7 and in column 8, lines 6-15 that a continuous wave laser is used to probe the IC device.

As to claims 11 and 19, Paniccia discloses in Figure 4 the mode locked laser 407 is positioned to provide a laser beam 413, which is focused on an active region 403. It is obvious that the mode locked laser 407 had positioned by a user in order to focused on an active region 403.

As to claims 12 and 20, Paniccia discloses in Figure 8 the mode-locked laser 803 is positioned automatically using image recognition 843 via camera.

As to claim 13, Although Paniccia does not explicitly disclose that power is supplied to the DUT, the power supply is inherent to the DUT since it require power to operate.

As to claims 14-15, Paniccia discloses in Figure 4 testing is performed on the device in a package form (column 5, lines 9-10) and prepackage (via to be packaged, column 1, lines 50-55).

As to claim 16, Paniccia discloses the device includes only some of its layers (column 1, lines 62-67).

Conclusion

4. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trung Nguyen whose telephone number is 703-305-4925. The examiner can normally be reached on Monday through Friday, 8:30AM – 5:00PM. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached at 703- 308-1680.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.


8/1/02
MICHAEL SHERRY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

DETAILED ACTION

1. The Final Rejection mailed May 20, 2002 has been withdrawn. Accordingly, a new office action will be mailed.

Conclusion

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Trung Nguyen whose telephone number is 703-305-4925. The examiner can normally be reached on Monday through Friday, 8:30AM – 5:00PM. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-5841. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Sherry can be reached at 703- 308-1680.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)-308-0956.



MICHAEL SHERRY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800